GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA

UNSTARRED QUESTION NO:2076
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AGRICULTURAL RESEARCH
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Will the Minister of AGRICULTURE be pleased to state:

(a) whether the Government propose to make the agricultural research favourable to the Indian farmers;

(b) if so, the details thereof;

(c) if not, the reasons therefor; and

(d) the broad achievements made by agricultural research during each of the last three years?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI HUKUMDEO NARAYAN YADAV)

(a) Yes, Sir.

(b) The Indian Council of Agricultural Research is the apex scientific organization in agriculture at national level to plan, undertake, promote, aid and coordinate agricultural research, education and the extension of new technologies through front line demonstrations. It will continue its research efforts on development of the improved crop varieties and livestock, poultry and fish breeds and their production and post-harvest technologies including farm implements and machinery for the different agro-ecologies with consideration of the needs of the farming community, and to provide them to the farmers through front line demonstrations, trainings and interactions.

(c) Does not arise.

(d) As per Annexure-I.

ANNEXURE-I

2000-2001

More then 135 high yielding and disease resistant varieties/hybrids of various field and horticultural crops were released for various agro-ecoregions and production systems of the country. This was supported by the generation of the appropriate agro-techniques. A total of 2,413 tonnes of breeder seed was also produced, which included about 55 tonnes of vegetable seed. Promising major crop-based cropping systems, having economic viability in different agro-ecoregions, have been evolved, keeping in view the resource availability and its efficient utilization. More emphasis was given on the development of farm machinery and post-harvest technology, and on-farm and off-farm value-addition, processing and storage. In the livestock and poultry improvement and management, efficient techniques for micro-satellite DNA markers, monoclonal antibody kits, diet supplements and semen preservation were developed. In the fish improvement and management, Indian catfish was successfully crossbred with African catfish, besides development of various fish production and processing techniques.

Under the National Agricultural Technology Project (NATP),most of the research programmes were finalized and sanctioned under the Teams of Excellence (ToE), Mission Mode (MM), Production System Research (PSR), Institution-Village Linkage Programme (IVLP) and Competitive Grant Programme (CGP) modes.

Council established ICAR Research Complex for Eastern Region at Patna for enhancing productivity and production through multi-disciplinary research in system perspective; National Bureau on Agriculturally Important Microbes at New Delhi; and National Research Centre on Seed Species at Ajmer; in addition to upgradation of NRC on Semi-Arid Horticulture, Bikaner to a nationa institute.

1999-2000

More than 75 high yielding and disease resistant varieties/hybrids of crops which include 51 of field crops and 24 of horticultural crops, were released for various agro-ecoregions of the country. A total of 61,015 samples of diverse germplasm were procured from

63 countries. A total of 2,302.48 tonnes breeder seed of oilseed, pulse, fibre and forage crops was produced. Bio-intensive integrated pest management module showed higher benefit: cost ratio than farmer`s practice in Andhra Pradesh. DNA-based finger-printing technology was developed for all released potato varieties. A number of transgenic potato lines resistant to tuber moth and Helicoverpa were developed. Soil and land form conditions were mapped for different states and land resource atlas of North-Eastern region was prepared. Cost-free surge irrigation, an alternate to lift irrigation, was found promising in maize, sunflower and sorghum. Technologies were developed for improving water-use efficiency of various crops. Several agricultural implements and machinery including tractor-mounted hydraulically controlled wetland leveller, till planter, multi-crop planter, chilli seed extractor, etc. were developed.

The livestock census database was updated for 1992, and distribution maps and photographs were added. A fully operational information system in animal genetic resources was developed. A High Security Animal Disease Laboratory was commissioned at Bhopal. In rabbits, feeding of soyflakes improved the wool production and inclusion of locally available energy sources in their diet was found very economical. Mechanical methods of preantral follicle isolation proved better than enzymatic method in buffalo. In Bharat Merino, 100% embryo recovery was observed by double puncture technique. Addition of bromocryptin in poultry diet improved the egg production. A GIS map of the river Kosi was prepared to know the habitat of different life stages of endangered mahseer.Fish improvement and production technology were studied for freshwater, cold water and brackishwater aquaculture. Two projects under Jai Vigyan National Science and Technology Mission, one on Household Food and Nutritional Security and the other on Conservation of Agro-Biodiversity were launched.

1998-99

More than 84 high yielding disease resistant varieties/hybrids of various field and horticultural crops were released for various agro-ecoregions and production systems of the country. About 3738 accessions were added to the National Genebank, while 280 samples of agrihorticultural crops were exported to 20 countries. In case of animal and fish genetic resources, efforts were concentrated to characterize our local breeds and strains. A total of 2,643.6 tonnes of breeder seed was produced and the major quantity belonged to cereals, oilseeds and pulses. Low-cost technology for large-scale production of vermicompost from coconut plantation wastes was standardized. Drip irrigation, border method of irrigation, mulching and supplemental irrigation were developed for saving of irrigation water. Rice- potato- wheat and sugarcane provided higher net returns than the rice- wheat system. The other cropping systems found promising at farmers fields were: rice- pea in Assam, groundnut - wheat in Bihar, soybean- gram and rice- tomato in Madhya Pradesh, rice- onion in Himachal Pradesh, sorghum- sunflower, blackgram- gram etc. in Maharashtra, clusterbean- wheat in Rajasthan, and maize- pea + wheat and blackgram- wheat in Uttar Pradesh.

For livestock and poultry improvement and management, information system on animal genetic resources was upgraded. Disease forecasting computer-based models were developed. The absence of rinderpest virus activity in various parts of the country was confirmed. Camel milk was found to have therapeutic value in tuberculosis treatment. Diagnostic kits for infectious bovine rhinotracheitis, brucellosis and bluetongue were developed. Multiple emulsion haemorrhagic septicaemia vaccine was developed. Embryo transfer technology protocols for cattle, buffalo, sheep, goat, etc. were being standardized. A new hormonal formulation, ovatide, was developed for fish breeding programme. A 6-row tractor-mounted inclined plate planter; manually-operated single-row garlic planter; power tiller-operated multi-crop planter; power tiller-operated potato planter-cum-fertilizer applicator; solar fruit and vegetable dehydrator; pin-mill for low temperature grinding of tough agricultural produce of 100 kg/hr capacity; and technology for preparation of soy-souce from okara (a byproduct of soymilk and soy paneer-tofu) were developed. The National Agricultural Technology Project, a prestigious World Bank project, became fully functional in November, 1998.